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('5981661' | '5719236' | '5698632' | '5723551'  
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DATE: Wednesday, December 15, 2004 [Printable Copy](#) [Create Case](#)

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<u>L6</u>	('5981661'   '5719236'   '5698632'   '5723551'   '5612401'   '5731389')!.PN.	6	<u>L6</u>
<u>L5</u>	l3 and L4	11	<u>L5</u>
<u>L4</u>	lotader	182	<u>L4</u>
<u>L3</u>	l1 and L2	3516	<u>L3</u>
<u>L2</u>	core near9 shell	16681	<u>L2</u>
<u>L1</u>	polysiloxane or silicone or polyorgosiloxane or polydimethylsiloxane or dimethylsiloxane	170386	<u>L1</u>

END OF SEARCH HISTORY

[0054] Preferably the lower alkylacrylate of the terpolymer is methyl acrylate and/or the monomer containing a heterocycle contains an epoxy group.

[0055] Component (c) can contain the heterocycle as part of the main polymer chain or in a pendant group. An example of the first possibility is maleic anhydride, and a particularly suitable pendant heterocyclic group is the glycidyl residue. A particularly preferred monomer (c) is glycidyl methacrylate.

[0056] An especially preferred composition is about 70 % ethylene, about 25 to about 30 % of ethyl acrylate, and 2 to 8 % of glycidyl methacrylate. A preferred melt index for the linear copolymer is from about 6 to about 8 grams/ 10 minutes, measured at 190 DEG C at 16 kg. load.

[0057] Some of these terpolymers are commercially available and all these terpolymers will be produced according to well-known processes. Commercially available terpolymers useful in the present invention include ethylene/methylacrylate/glycidyl methacrylate sold under the tradenames LOTADER by ATOFINA. For example, LOTADER AX 8900 is an ethylene-methyl acrylate-glycidyl methacrylate (GMA) copolymer comprising, by weight, 25% acrylate and 8% GMA, having an MFI of 6 (190°C/2.16 kg) and LOTADER AX 8930 is an ethylene-methyl acrylate-glycidyl methacrylate (GMA) copolymer comprising, by weight, 25% acrylate and 3% GMA, having an MFI of 6 (190°C/2.16 kg). Also available is a LOTADER grade with maleic anhydride.

[0058] The weight ratio between the core/shell and the terpolymer can vary within wide limits, but is preferably 80 – 20 % of the core/shell and 20 to 80% of the terpolymer, more preferably 40 – 70 % of the core/shell and 60 to 30% of terpolymer, and most preferably about 50% of each.

[0059] As mentioned hereinabove, the impact modifying synergistic mixture should be used in an impact modifying amount. This amount can also vary within wide limits, and will also depend on the influence on other physical properties which can be tolerated.

[0060] In general the synergistic combination of the present invention will be used in a total amount of 10 to 50 weight percent of the composition, preferably 15 to 40%.

[0061] The invention also relates to a composition comprising a polymer and the impact additive as defined above. Preferably the polymer is thermoplastic.